

REMARKS

Examiner Doan is thanked for her thorough examination of the Subject Patent Application. Amendments have been made to the Claims and is so doing are believed to now render this application in condition for allowance.

Regarding the rejections of Claims 1 - 4, and 7 -10 under 35 USC 102, as anticipated by Godbey et al (US 5,013,681), independent Claims 1 and 11 have been amended to more clearly describe this invention in terms of the specific cleaving procedures employed. The Godbey et al prior art attains their desired configuration of Si on insulator by polishing and the etching ,thick layer 20, as well as layer 22, to expose Si layer 24. This is clearly described cols 3 -4, and in Figs. 1 - 6. The third embodiment of this prior art which Examiner cites, shown in Figs 9 - 13, again results in a silicon layer 74, on an underlying insulator layer, but again using the identical processing conditions, (etching or polishing), used in their first embodiment again shown using Figs. 1 - 6. This is stated in col 5, line 49 - 50. Again in direct contrast applicant's process describes and claims the desired configuration of silicon on an insulator layer obtained via a separation procedure via a water jet cleaving procedure, (for Claim 1), and pressurized fluid or compressed air cleaving procedure (for Claim 11), with the cleaving procedure directed at the strain gradient. Surely this is a different process than the process described in the Godbey prior art in which first polishing is employed to remove some material followed by a selective wet etch employed to remove the remaining unwanted material. Applicant does not thin and/or selectively remove unwanted material, in contrast total separation not removal of unwanted

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material is realized via creation of a strain gradient at the desired interface followed by a cleaving procedure such as water jet, pressurized fluid or compressed air.

Regarding the rejection of the Claim 1, under 35 USC 102, as anticipated by Sakaguchi et al (US 6,221,738), this prior art needs to convert both the silicon layer and the underlying silicon alloy layer to porous layers, then re-convert the porous silicon layer to a non-porous layer, now overlying a still porous silicon alloy layer, and then finally mechanically separating the non-porous silicon - porous silicon alloy interface. Again this complex process sequence is different from applicant's process in which a strain or stress gradient between a strained silicon layer and an underlying relaxed silicon alloy layer allows a water jet, pressurized fluid or compressed air cleaving procedure to perform the desired separation without having to convert and then reconvert the critical silicon layer to a porous and then a non-porous layer. Since this strained silicon layer in applicant's invention will be the layer in which the MOSFET device is formed in, it would be dangerous to continually change the density (porosity) of this layer. Therefore, again applicant's invention simplifies the attainment of a strained silicon layer on insulator via a **cleaving** procedure which offers a desired complete separation applied to an interface featuring a **strain gradient**.

Referring to the rejection of Claims 11 - 13, and 15 - 19, under 35 USC 102(b) as being anticipated by Sharma et al (US 5,344,524), this prior art clearly shows (Fig 5) a grinding and selective etching procedure to remove the unwanted material to result in the desired SOI configuration, again not similar to applicants sequence in which a strain gradient is formed with a

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specific cleaving procedure applied at the strain interface resulting in **complete separation of unwanted material**, without a grinding or selective etching procedure.

Therefore based on the amendments made to independent Claims 1 and 11, and the arguments presented highlighting applicants use of a specific cleaving procedure to **separate, not to grind, polish or etch**, as prior art describes, reconsideration of Claims 1 - 4, 7 - 10, 11- 13, and 15 - 19, rejected under 35 USC 102, is requested.


Referring to the rejection of the Claims 5 - 6, and 14, under 35 USC 103, as being unpatentable over Godbey et al (US 5,013,681), Sharma et al (US 5,344,524), in view of King et al (US 4,142,925), not one of these prior art describe the attainment of a strained silicon layer on an underlying relaxed silicon alloy layer via a **specific cleaving procedure such as a water jet, pressurized fluid, or compressed** applied to an interface featuring a strain gradient. Again as argued against the rejections based on 35 USC 102, all the above prior art uses a combination of polishing, grinding or selective etching to at first partially, and then completely remove unwanted material, wherein applicant creates a strain interface followed by complete **separation** from unwanted material via a specific cleaving procedure. Therefore if none of these prior art describe this novel procedure, (specific cleaving for complete separation) no combination of the above prior art can result in applicant's invention. Therefore reconsideration of the rejections of independent Claims 5 , 6 and 14 rejected under 35 USC 103, is requested.

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Claims 20 - 27, are to be used for a divisional application therefore cancelled, an withdrawn from consideration

Allowance of Claims 1- 19 is requested.

It is requested that should Examiner Doan not find that the Claims are now Allowable that she call the undersigned attorney at 845-452-5863, to overcome any problems preventing allowance.

Respectfully submitted,

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